

REMARKS

I. Summary of Office Action

Claims 1-65, 90-100, and 133-144 are currently being considered in the present application.

The Examiner rejected claims 1-3, 7, 11, 14, 90-91, 93-94, 99, 133, 135, 137-138, and 143 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,566,084 to Cmar (hereinafter, "Cmar").

Claims 4-6, 8-10, 12-13, 15-65, 92, 95-98, 100, 134, 136, 139-142, and 144 were rejected by the Examiner under 35 U.S.C. § 103(a) as being obvious over various combinations of Cmar, U.S. Patent No. 5,634,016 to Steadham et al. (hereinafter, "Steadham"), U.S. Patent No. 6,122,603 to Budike, Jr. (hereinafter, "Budike"), U.S. Patent No. 6,366,889 to Zaloom (hereinafter, "Zaloom"); and U.S. Patent No. 6,636,893 to Fong (hereinafter, "Fong").

II. Summary of Applicants' Reply

Applicants have amended claims 1, 16, 31, 42, 54, 90, and 133 in order to correct recently discovered typographical errors and to more particularly define the present invention. No new matter has been added by these amendments to the claims.

The Examiner's rejections under 35 U.S.C. §§ 102(b) and 103(a) are respectfully traversed.

Reconsideration of this application is respectfully requested.

III. The Rejections Under 35 U.S.C. §§ 102(b) and 103(a)

Claims 1-65, 90-100, and 133-144, including independent claims 1, 16, 31, 42, 54, 90, and 133, were rejected by the Examiner under either 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a). The Examiner's rejections are respectfully traversed.

Applicants respectfully submit that, contrary to the Examiner's contention, each of claims 1-65, 90-100, and 133-144 is allowable for at least the following reasons.

A. Independent Claim 1 Is Allowable Over Cmar

The Examiner rejected independent claim 1 under 35 U.S.C. § 102(b) as being anticipated by Cmar. The Examiner's rejection of claim 1 is respectfully traversed by applicants.

Generally speaking, the invention defined by claim 1 relates to a system for monitoring and managing, in real time, resource consumption for at least one building. In particular, a system as defined by amended independent claim 1 requires each of the following elements (emphasis added):

a plurality of monitoring devices and metering devices associated with said building resource delivery and utilization structures;

a data collection and processing device at said building connected to and gathering data from each monitoring device and metering device associated with said building;

a building management resource system in communication with said data collection and processing device, wherein the building management resource system uses said communication received from said data collection and processing device in determining the resource consumption for said building; and

a database storing data comprising survey studies of said building, infrastructure data for said building, and current and historical resource consumption for said building, wherein said database is in communication with said data collection and processing device.

Therefore, according to the invention, a building management resource system is able to determine appropriate resource consumption for a building based on information collected by a plurality of monitoring and metering devices and processed by a data collection and processing device. As explained in applicants' specification, among other things, this ability to monitor and respond to resource consumption in real time enables building tenants and/or owners, for example, to manage resource expenditures and conservation efforts more efficiently than would otherwise be possible.

Contrary to the Examiner's contention on pages 2-3 of the Office Action, Cmar does not show (or even suggest) at least several features of applicants' claimed invention as defined by claim 1. In fact, Cmar fundamentally teaches away from several principles of the claimed invention by seeking to determine energy conservation strategies without end-use metering, and using only monthly electric billing data (not real time consumption data), minimal facility data (area data), and daily maximum and minimum outside temperature data obtained as from the

government (see, e.g., the Abstract of Cmar). Several specific differences between Cmar and the invention defined by claim 1 are now explained.

Cmar Does not Show or Suggest the Claimed Monitoring and Metering Devices

As explained in applicants' originally filed specification, a plurality of monitoring and metering devices are used according to the invention for gathering information about, for example, the loads on particular types of mechanical equipment, the loads on a building's power risers and switches, and weather conditions local to the building (see, e.g., page 12 of applicants' specification).

Nowhere in the entirety of Cmar is the use of "a plurality of monitoring and metering devices" (as required by applicants' claim 1) ever shown or suggested. In fact, as mentioned above, one of Cmar's objectives is to eliminate the need for such detailed metering or monitoring in formulating energy conservation strategies.

For example, as described in the Abstract of Cmar, all that is used by Cmar are "monthly electric billing data over the years" (emphasis added), "minimal facility data (just area data)" (emphasis added), and "daily maximum and minimum outside temperature data" (which, as described in column 6, lines 17-19 of Cmar, is obtained using available government (NOAA) data). Similarly, at column 6, lines 15-25, Cmar explains that consumption and demand patterns are identified using "12 consecutive months of electric billing," "12 corresponding months of NOAA weather data," "building area (gross square feet)," and "12 corresponding months of daily hours occupancy with percentage use of the facility." Neither these portions of Cmar nor any other portion shows or suggests the use of "a plurality of monitoring and metering devices" as required by claim 1.

Moreover, applicants respectfully submit that there simply is no support for the Examiner's contention on pages 2-3 of the Office Action that part 1B' of Cmar's FIG. 3A shows "monitoring devices associated with the building resource delivery and utilization structures." Aside from the fact that resource delivery and utilization structures are not even addressed in Cmar, applicants note that nothing in Cmar even suggests that the energy conservation measures (ECM) or typical use statistics collected at 1B' in any way involve the use a metering device or monitory device as required by claim 1. On the contrary, as suggested in column 5, lines 30-31

of Cmar, that which is collected at 1B' is nothing more than "general statistics about facility energy consumption."

Accordingly, applicants respectfully submit that Cmar does not show or suggest the invention defined by independent claim 1, which requires the use of "a plurality of monitoring and metering devices associated with [a] building's resource delivery and utilization structures." Thus, as the combination of elements of independent claim 1 is not disclosed by Cmar, claim 1 is allowable. Accordingly, applicants respectfully request that the rejection of claim 1, and claims 2-15 which depend from claim 1, be withdrawn by the Examiner.

Cmar Does not Show or Suggest the Claimed Data Collection and Processing Device

Applicants respectfully submit that, for at least the following reasons, the Examiner is incorrect in stating that Cmar teaches "a data collection and processing device at the building, gathering data from each monitoring device (fig. 3A, part 1B'")."

First, as described in column 17, lines 43-44 of Cmar, part 1B'" includes nothing more than "facility statistics, based on predicted or assumed situations" (emphasis added). It is respectfully submitted that nowhere in Cmar is the processing of data that is received from anywhere, much less from a monitoring or metering device, ever disclosed. Rather, Cmar merely explains that this and other data inputs "continue to grow across multiple projects and are placed in computer storage," at which point an "expert system" comes into play (Cmar, column 17, lines 45-47).

Second, as explained above, Cmar fails to show or suggest "a plurality of monitoring and metering devices associated with [a] building's resource delivery and utilization structures" as claimed by applicants. For this reason, Cmar must necessarily also fail to show or suggest a "data collection and processing device ... gathering data from each monitoring device and metering device associated with [the] building" (claim 1, emphasis added).

In light of the above, applicants respectfully submit that applicants' claim 1, which requires "a data collection and processing device ... gathering data from each monitoring device and metering device associated with [the] building," is not anticipated by Cmar. Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claim 1, and claims 2-15 which depend from claim 1.

Cmar Does not Show or Suggest the Claimed Building Management Resource System

Applicants also respectfully disagree with the Examiner's assertion on page 3 of the Office Action that Cmar teaches "a building management resource system in communication with the data collection and processing device (fig. 3B & 3D)."

As explained in applicants' specification, the claimed building management resource system receives information that has been collected and processed by a data collection and processing device, and uses this information to set the resource states for the building (see, e.g., page 13, line 30 to page 14, line 2 of the specification). For example, when a monitoring device external to the building reports to the data collection and processing device a spike in the real-time price of energy, and once the building management resource system receives this information from the data collection and processing device, it can offset the anticipated spike in energy cost by appropriately adjusting the building's thermostat for the common areas of the building (see applicants' specification, page 14, lines 3-9).

Unlike the claimed invention, Cmar simply does not show or suggest a building management resource system that receives information from a data collection and processing device and uses this information to set resource consumption for the building. On the contrary, once desired changes in consumption are contemplated by the process described in Cmar, a report is issued to management, which may then decide against or in favor of implementing the changes (see, e.g., column 10, lines 63-67 of Cmar). However, reporting conclusions to management that must then manually implement any changes is clearly not the same as using a building management resource system to implement a change in resource consumption, as is required by applicants' claim 1.

For at least the foregoing reasons, applicants respectfully submit that Cmar neither shows nor suggests a data collection and processing device that uses "communication received from [the] data collection and processing device in determining the resource consumption for [the] building" (claim 1). Therefore, applicants respectfully submit that claim 1 is allowable over Cmar for this reason as well, and request that the rejection of independent claim 1, and dependent claims 2-15, be withdrawn by the Examiner.

B. Independent Claim 16 Is Allowable Over Cmar and Budike

The Examiner rejected claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Cmar in view of Budike. Applicants respectfully traverse the Examiner's rejection.

Generally speaking, the invention defined by claim 16 relates to a system for monitoring, gathering, processing, integrating, and reporting real time resource consumption for at least one building. In particular, the invention defined by independent amended claim 16 requires each of the following (emphasis added):

a plurality of monitoring devices and metering devices associated with said building building's resource delivery and utilization structures;

a first data collection and processing device at said building connected to and gathering data from each monitoring device and metering device;

a database storing data collected from said first data collection and processing device, field surveys of said building, infrastructure data for said building, resource consumption and delivery for said building;

a second data collection and processing device remote to said building, said second data collection and processing device in communication with said first data collection and processing device, said database, and said resource delivery and utilization structures of said building; and

a building management resource system in communication with at least one of said data collection and processing devices, wherein the building management resource system uses said communication received from at least one of said data collection and processing devices in determining the resource consumption and resource delivery for said building.

Contrary to the Examiner's assertion on page 4 of the Office Action, for at least the same reasons as set forth above in connection with claim 1, applicants respectfully submit that Cmar fails to show or suggest at least the claimed plurality of monitoring devices and metering devices, the first data collection and processing device that gathers data from each monitoring device and metering device, and the building management resource system that determines the resource consumption of the building. The Examiner has also used Budike to show "a main data collection system (fig. 2, part 1) and a second utility monitoring system connected to it (fig. 2, part 39)" (Office Action, pages 4-5). While Budike relates to a multi-utility energy control system for monitoring and taking corrective actions in response to the monitored data, the addition of Budike does not render applicants' independent claim 16 unpatentable.

Accordingly, applicants respectfully request that, for at least the reasons advanced above in connection with claim 1, the rejection of claim 16, and claims 17-30 which depend from claim 16, be withdrawn by the Examiner.

C. Independent Claim 31 Is Allowable Over Cmar and Budike

The Examiner rejected claim 31 under 35 U.S.C. § 103(a) as being unpatentable over Cmar in view of Budike. Applicants respectfully traverse the Examiner's rejection.

The invention defined by independent amended claim 31 requires each of the following (emphasis added):

a device for receiving and processing resource consumption data for said building and sending data to at least one of a device or building resource management system that controls the resource consumption of said building, wherein said device for receiving and processing resource consumption data is remote to said building;

a database storing data comprising survey studies of said building, infrastructure data for said building, current and historical resource consumption for said building, and resource billing data; and

a graphical user interface for displaying in real time resource consumption data for said building.

For at least the same reasons provided above in connection with claim 1, Cmar does not show or suggest "sending data to at least one of a device or building resource management system" based on received and processed resource consumption data for the building, much less that such data received by the device or building resource management system be used to control the resource consumption of the building. Moreover, applicants respectfully submit that, even with the addition of Budike, the invention defined by claim 31 is patentable.

Accordingly, applicants respectfully submit that, for at least the reasons advanced above in connection with claim 1, the rejection of claim 31, and claims 32-41 which depend from claim 31, be withdrawn by the Examiner.

D. Independent Claim 42 Is Allowable Over Cmar and Fong

The Examiner rejected claim 42 under 35 U.S.C. § 103(a) as being unpatentable over Cmar in view of Fong. Applicants respectfully traverse the Examiner's rejection.

For at least the same reasons provided above in connection with claim 1, Cmar does not show or suggest “automatically determining the resource consumption and resource delivery for said building by a building management resource system based on [previously] acquired resource consumption, resource delivery, and mechanical equipment data for [the] building” (claim 42, emphasis added). Rather, as explained above in connection with claim 1, any changes that are implemented in Cmar with regard to resource consumption are the result of management actions based on a provided report (see, e.g., column 10, lines 63-67 of Cmar). Moreover, applicants respectfully submit that the addition of Fong, which seeks to provide web-bridged energy and facilities management, does not provide that which is missing in Cmar.

Accordingly, applicants respectfully request that, for at least the reasons advanced above in connection with claim 1, the rejection of claim 42, and claims 43-53 which depend from claim 42, be withdrawn by the Examiner.

E. Independent Claim 54 Is Allowable Over Cmar and Budike

The Examiner rejected claim 54 under 35 U.S.C. § 103(a) as being unpatentable over Cmar in view of Budike. Applicants respectfully traverse the Examiner’s rejection.

The invention defined by independent amended claim 54 requires each of the following (emphasis added):

- receiving input from at least one data collection and processing device located at said building;
- processing input from said data collection and processing device;
- sending instructions based on said processed input to a building management resource system to automatically set at least one of resource consumption, resource delivery, or mechanical equipment for said building; and
- generating resource consumption bills at least on a tenant basis.

For at least the same reasons provided above in connection with claim 1, Cmar does not show or suggest “sending instructions ... to a building management resource system to automatically set at least one of resource consumption, resource delivery, or mechanical equipment for [the] building.” Rather, as explained above in connection with claim 1, any changes that are implemented with regard to resource consumption are the result of management actions based on a provided report (see, e.g., column 10, lines 63-67 of Cmar). In addition,

applicants respectfully submit that the Examiner has not even suggested that Cmar shows or suggests “generating resource consumption bills at least on a tenant basis,” as required by claim 54. Moreover, applicants respectfully submit that the addition of Budike does not render applicants’ claim 54 unpatentable.

Accordingly, applicants respectfully request that, for at least the foregoing reasons, the rejection of claim 54, and claims 55-65 which depend from claim 54, be withdrawn by the Examiner.

F. Independent Claim 90 Is Allowable Over Cmar

The Examiner rejected claim 90 under 35 U.S.C. § 102(b) as being anticipated by Cmar. Applicants respectfully traverse the Examiner’s rejection.

As explained above with respect to claim 1, Cmar fails to show or suggest a plurality of monitoring devices and metering devices that are associated with a building for which resource consumption is being tracked. Accordingly, Cmar must also fail to show or suggest “instructions for acquiring data from a plurality of monitoring devices and metering devices associated with said building resource delivery and utilization structures” (claim 90, emphasis added).

Additionally, as explained above with respect to claim 1, Cmar fails to show or suggest a building management resource system that uses communication received from the data collection and processing device in determining resource consumption for the building. Accordingly, Cmar must also fail to show or suggest “instructions for setting said building’s resource consumption, by said building management system, based on acquired data from said plurality of monitoring devices and metering devices” (claim 90, emphasis added).

For at least the foregoing reasons, applicants respectfully submit that Cmar does not show or suggest each element of independent claim 90 as required to support the Examiner’s finding of anticipation. Therefore, applicants respectfully request that the Examiner withdraw the rejection of claim 90, and claims 91-100 which depend from claim 90.

G. Independent Claim 133 Is Allowable Over Cmar

The Examiner rejected claim 133 under 35 U.S.C. § 102(b) as being anticipated by Cmar. Applicants respectfully traverse the Examiner’s rejection.

As explained above with respect to claim 1, Cmar fails to show or suggest a plurality of monitoring devices and metering devices that are associated with a building for which resource consumption is being tracked. Accordingly, Cmar must also fail to show or suggest “means for acquiring data from a plurality of monitoring devices and metering devices associated with said building resource delivery and utilization structures” (claim 133, emphasis added).

Additionally, as explained above with respect to claim 1, Cmar fails to show or suggest a building management resource system that uses communication received from the data collection and processing device in determining resource consumption for the building. Accordingly, Cmar must also fail to show or suggest “means for setting said building’s resource consumption, by said building management system, based on acquired data from said plurality of monitoring devices and metering devices” (claim 133, emphasis added).

For at least the foregoing reasons, applicants respectfully submit that independent claim 133 is allowable over Cmar. Therefore, applicants respectfully request that the Examiner withdraw the rejection of claim 133, and claims 134-144 which depend from claim 133.

IV. The Rejections of Dependent Claims 2-15, 17-30, 32-41, 43-53, 55-65, 91-100, and 134-144 Under 35 U.S.C. §§ 102(b) and 103(a)

The Examiner rejected each of dependent claims 2-3, 7, 11, 14, 91, 93-94, 99, 135, 137-138, and 143 under 35 U.S.C. § 102(b) as being anticipated by Cmar. In addition, the Examiner rejected each of dependent claims 4-6, 8-10, 12-13, 15, 17-30, 32-41, 43-53, 55-65, 92, 95-98, 100, 134, 136, 139-142, and 144 under 35 U.S.C. § 103(a) as being unpatentable over various combinations of Cmar, Budike, and Fong.

Applicants respectfully submit that the Examiner’s rejections of claims 2-15, 17-30, 32-41, 43-53, 55-65, 91-100, and 134-144, each of which depends from one of independent claims 1, 16, 31, 42, 54, 90, and 133, are moot in view of the foregoing reasons for the patentability of the independent claims. Therefore, applicants respectfully request that the Examiner withdraw the rejections of claims 2-15, 17-30, 32-41, 43-53, 55-65, 91-100, and 134-144.

V. Petition For Extension Of Time

Applicants have submitted herewith a petition for a three-month extension of time for responding to the Office Action. The Director is hereby authorized to charge any additional fees which may be required in connection with this response, or credit any overpayment, to Deposit Account No. 08-0219.

VI. Conclusion

Applicants wish to clarify for the record, if necessary, that the claims have been amended to expedite prosecution. Moreover, applicants reserve the right to pursue the subject matter recited in the original claims in a continuation application.

Any narrowing amendments made to the claims in the present Reply to Office Action are not to be construed as a surrender of any subject matter between the original claims and the present claims, but rather, merely applicants' best attempt at providing one or more definitions of what the applicants believe to be suitable patent protection. In addition, the present claims provide the intended scope of protection that applicant are seeking for this application. Therefore, no estoppel should be presumed, and applicants' claims are intended to include a scope of protection under the Doctrine of Equivalents.

Moreover, applicants respectfully submit that, as described above, the cited prior art does not show or suggest the combination of features currently recited in the claims. Applicants do not concede that the cited prior art shows any of the elements recited in the claims. However, applicants have provided specific examples of elements in the claims that are clearly not present in the cited prior art.

Applicants strongly emphasizes that one reviewing the prosecution history should not interpret any of the examples applicants have described herein in connection with distinguishing over the prior art as limiting to those specific features in isolation. Rather, applicants assert that it is the combination of elements recited in each of the claims, when each claim is interpreted as a whole, which is patentable. Applicants have emphasized certain features in the claims as clearly not present in the cited references, as discussed above, for the sake of simplicity.

Further, applicants hereby retract any arguments and/or statements made during prosecution that were rejected by the Examiner during prosecution and/or that were unnecessary to obtain allowance, and only maintains the arguments that persuaded the Examiner with respect

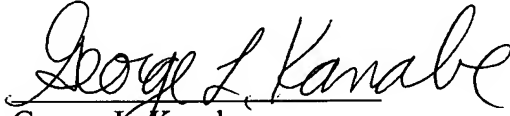
to the allowability of the patent claims, as one of ordinary skill would understand from a review of the prosecution history. That is, applicants specifically retract statements that one of ordinary skill would recognize from reading the file history were not necessary, not used and/or were rejected by the Examiner in allowing the patent application.

For all the reasons advanced above, applicants respectfully submits that the rejections have been overcome and should be withdrawn, and that this application is in condition for allowance. Reconsideration and prompt allowance of this application are respectfully requested.

Respectfully submitted,

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